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Original Articles.

THE PREVENTION OF TYPHOID FEVER BY VACCINATION.

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Since the discoveries of Frankel, 1893, and Sir A. E. Right, 1896, a great deal of attention has been devoted to the method of preventing Typhoid Fever by means of vaccination. Extended experiments have been carried out in all parts of the world. Especially in the armies there has been an immense amount of work done along this line; and the results have proved conclusively the utility of anti-typhoid vaccination.

That the injection of killed typhoid bacilli in the normal body sets the machinery of the organism in full motion is shown by the appearance in the blood after the period of two or three days, of newly formed and specific antibodies. These antibodies continue to increase for the period of eight or ten days, when they have reached their maximum; then begins a slow and gradual return to a lower level. If the injection be repeated at this time, this increase will be still furthered and prolonged.

It has been asserted by one that the increase may persist for the period of two years, but this is still a question, as there have been no systemic observations made to determine the presence of these antibodies above the normal after this length of time. There is, however, evidence to the effect that the once immunized organism retains the power to respond with increased promptness to the corresponding infection, even if all the antibodies that appeared after the primary injection had disappeared at this time. It has also been shown that the man who has not been inoculated is twice as liable to typhoid fever and four times as liable to die from it.

The United States Army has adopted this method of making the soldiers immune as a routine measure, and all soldiers are injected before going on a long campaign, such as the mobilization of the troops along the Mexican border last season. There, 15,000 men encamped for a period of over two months, in a climate strange to the most of them, and only two cases of typhoid occurred within this period, one a

soldier who had received the proper injections and had a very mild attack, the other a civilian teamster who had never received the immunizing agent. This shows without a doubt that the typhoid bacilli were present and that the conditions were favorable for their development.

My experience with anti-typhoid vaccination covers 170 persons vaccinated during the latter part of October and the first two weeks in November. We had fourteen cases of typhoid develop among 135 laborers employed on the construction work at Keokuk. These men came down with an average of one every other day. I saw at once that something had to be done to prevent a widespread epidemic among the men, which would mean a great loss of time and money, so I proceeded at once to vaccinate the men who were in any way associated with the men who had already contracted the disease. The result was that no new cases developed after the men had been vaccinated.

After these conclusive demonstrations of its value in preventing typhoid fever, typhoid fever vaccination might well be considered by all practitioners as a safe and reliable prophylaxis against widespread epidemics. Especially should all members of families be vaccinated after one has contracted the disease. It should be used also in schools where typhoid has made its appearance, and in all cases where large bodies of men are camped or engaged in a work where they will remain for a considerable length of time.

I do not claim that this should in any way make one careless about sanitary conditions, but typhoid vaccination should be used along with all other measures which tend to lessen the development and spread of the typhoid bacillus.

A word about the manner in which this work is carried out might be of interest to you.

The site of the injection is in the arm at the insertion of the deltoid muscle. The arm is first scrubbed with some good liquid soap, then washed off with sterile water, then alcohol, iodine, bichloride, or any good anti-septic solution; the needle is then plunged through the skin, the proper amount introduced, the needle withdrawn and an assistant covers the needle puncture with collodion.

There are usually three injections given, the first containing 250,000,000 killed bacilli, the second and third of 1,000,000,000 killed bacilli each.

As to the reaction: seventy per cent showed no reaction farther than that which would follow a needle puncture; twenty-eight per cent showed a local reaction, which lasts for about twenty-four hours, and consists of a zone around the needle puncture red, hard and indurated—the whole arm may ache and axillary glands may become tender; two per cent showed a general reaction. In this the symptoms are insomnia, nervousness, temperature of 100 to 101, vomiting and headache, but these were entirely gone in twenty-four to forty-eight hours.

MODERN PROGRESS IN THE KNOWLEDGE OF SYPHILIS.*

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Venereal diseases have existed since ancient times and will continue as long as the sexual instinct will continue in the individual. There are millions of people of both sexes affected with these diseases, who are a steady danger to innocent victims, as well, as to those who knowingly expose themselves. Their eventual successful control will depend on therapeutics which will radically and completely cure them and furthermore on means which will force everybody afflicted to undergo such treatment. Syphilis takes easily the first place among human scourges, exceeding tuberculosis and other infectious diseases in number and injury. Its ravages are far from being suspected by the public, being hidden behind the cover of shame, secrecy and ignorance. Statistics are under these circumstances unreliable, but as an estimate, the late Dr. Hyde believed that 18 per cent of the people of the United States were syphilitic. Due to a general immunization, syphilis does not appear now as malignant in its early stages as in the past times, but its late effects, especially on the nervous system, are on the increase.

Syphilis is a constitutional disease and while in the majority of cases limited to the skin and its appendages, may affect every organ and tissue of the body. The virus is for a time contained in the blood and other physiological fluids, but is found most often and regularly in pathological secretions. It requires for transmission some opening in the skin or mucous membranes such as a wound, abrasion, or a skin disease, and is therefore by no means restricted to the genital organs. At first, it affects the superficial tissues only, but if not stopped it may cause impairment of every organ, destruction of important functions, and be even the direct cause of death. Syphilis also affects the offspring in the most disastrous manner. Such children may perish before birth or if born on term either succomb sooner or later or live poorly developed in body and mind.

After decades of standstill in the knowledge of this disease, such rapid progress was made in the last five years in its investigation, that it is difficult to keep step with it. The most important advances involve the etiology, diagnosis and treatment of syphilis:

Etiology.—All modern progress in the knowledge of syphilis is primarily due to the discovery of the spirochetae pallidae by Schaudinn and Hoffman as its cause. Before this time syphilis was diagnosed clinically and treated entirely empyrically. Today the etiological re-

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lation of the spirochetae and syphilis is absolutely established. The proof for this is (1) their constant presence in all specific lesions, (2) their presence in the organs of syphilitic fetuses, (3) their transmissibility to monkeys, rabits, guinea pigs and other animals, and their reappearance in the lesions produced by them, (4) their absence in other diseases with the exceptions only of a very few known conditions, (5) the possibility of growing them in pure cultures, a recent achievement of Noguchi. The spirochetae are most numerous in the moist lesions of syphilis, like the chancre, mucous patches and condylomata, the great infectiousness of which were already known from clinical experience. These organisms can be demonstrated in smears and tissue sections. The quickest way to find them, however, is with the dark field illuminator. This is a simple instrument which can be attached to any microscope and as it can be managed without difficulty after a little practice should be in the hands of every practitioner. It consists of a condenser with an opaque disk in the center, which shuts off all direct light from the mirror, while the outlying rays are so reflected that they converge at a point above the glass slide with the specimen. The spirochetae appear as silvery threads on a black background. The serous secretion from an untreated chancre contains a large number of them during the first few weeks. After eight weeks they are difficult to find. They are distributed irregularly in groups and unless these are found, the search may be unsuccessful. The lesion is cleaned first and then rubbed until a clear serous secretion exudes, some of which is deposited on a glass slide. A cover glass is applied and the edges sealed with vaseline to prevent too rapid drying. When examined under the microscope the spirochetae are seen to be from one to three times as long as the diameter of a red blood corpuscle, of the shape of a corkscrew and with several windings which are very regular. They move rapidly, but if rotating around their axis may not change their position. They must be differentiated from the spirocheta refringens, which is coarser, has broader and more irregular windings. The spirochetae buccalis, very commonly found in the mouth and Vincent's spirillum can be easily recognized. The pathological changes in the tissues, due to the spirochetae are of three kinds and according to the predominance of each, or their simultaneous presence, different clinical symptoms are produced. They consist of toxic degeneration, small roundcell infiltration and hyperplasia of connective tissue.

Diagnosis.—The diagnosis of syphilis can be made today accurately and scientifically. Up to the present time it depended entirely upon clinical evidence, which however satisfactory in a great number of cases, did not even in the hands of experts exclude mistakes. Vigorous

treatment was not instituted until the secondary manifestations appeared, for the reason that it would have been unjustifiable to submit the patient to a severe treatment for years unless he had the disease, unquestionably. On the other hand, in the presence of unrecognized syphilis, the waiting policy gave the virus opportunity to develop rapidly and spread throughout the system. Now the demonstration of the spirochetae in the initial lesion and in the early manifestations, before mercury has been given, makes the diagnosis absolutely true. In the later stages when the organisms become so scarce, that it is difficult to find them, the diagnosis relies on the blood-serum test introduced by Wasserman, in 1906. It is based on the complement deviation reaction of Bordet and is of inestimable value not only for diagnostic, but also for therapeutic and prognostic purposes. A positive Wasserman is absolute evidence of syphilis, excepting from consideration, its rare occurrence in a few other known diseases, like scarlet fever, leprosy, etc. A negative reaction is of circumstantial value only as it may mean either the absence of syphilis or only a temporary quiescence in its activity. It is believed that the reaction is caused by a substance which is produced by the activity of the spirochetae, and must therefore be due to the presence of active syphilis. It is only when the system puts up a fight against the toxins and antibodies are formed, that a positive Wasserman is secured, otherwise even in very malignant cases, with no resistance from the patient it is frequently negative. It must not be forgotten that in syphilis of the nervous system where the Wasserman test often forsakes us, we still have other means to arrive at a diagnosis. The cerebro-spinal fluid contains normally such a small amount of protein that it can hardly be detected. In parasyphilitic diseases this amount is considerably increased. The increased protein is serum globulin and produces a granular deposit when treated with butyric acid according to Noguchi. Considerable importance is also attached to the cell count of the spinal fluid. An increased number of leucocytes is almost always a sign of a diseased condition of the meninges. While this condition is present occasionally in other non-specific disorders, the different clinical history and symptoms will clear up any confusion. The globulin reaction and the lymphocytsis are present in 90 per cent of para-syphilitic diseases of the nervous system but absent in similar diseases of other etiology. What is the prognostic value of the Wasserman reaction? Patients who have been treated for syphilis until it becomes negative, are by no means considered cured. It is only after the blood is tested repeatedly at regular intervals, and when the reaction has not changed for a considerable length of time, that a cessation of the disease is assured. It takes a skillful and scientific pathologist to make a Wasser-

man test dependable. The slightest fault in the technic changes the results and makes them unreliable. This however is no reason why every physician, even in the remotest locality, should not make frequent use of it. The taking of the blood from the brachial vein is an easy matter and the well equipped laboratories in the large cities will take care of the rest. With our present knowledge it is an injustice to the patient to diagnose a doubtful case as syphilis or to pronounce a patient cured without relying on the Wasserman reaction. A great advance in diagnosis and probably in the treatment of syphilis may realize in the near future through the recent work of Noguchi. He has seemingly succeeded in growing pure cultures of the spirochetae, the last missing link to the complete proof of the etiology of spyhilis. From the dead bacteria he now produces a vaccine which he calls Leutin. This he uses similarly to Pirket's cutaneous test with tuberculin. The Luetin injected into the skin of a syphilitic is said to cause a reaction which is specific for the disease. There is a slight systemic disturbance, and an inflammatory papule is formed which resembles the typical syphilitic papule. Extensive experiments have already shown that the Luetin test corresponds in its results closely to the Wasserman test and that it is unusual in non-syphilitic control cases. It even shows at times positive where the Wasserman is negative and this may be due to its greater sensitiveness towards the antibodies. If it proves to be what is claimed for it, it will do away with the difficulties of the Wasserman and enable every physician to be his own diagnostician.

Treatment.—All scientific investigations have as the ultimate aim the improvement of the therapeutics and the cure of diseases. The progress in the knowledge of the nature of syphilis has however so far not resulted in any direct therapeutic advances. Ehrlich's discovery of the salvarsan started from an entirely different direction, an investigation, is of the bio-chemical action of arsenical compounds. The discovery of the spirochetae in the primary lesions and also in the late gunmata has changed our ideas in regard to their treatment. The chancre represents the storage of the greatest number of the germs and as it is evident that the severity of the process depends on their invasion of the system, in a greater or smaller number the idea is rational to try to moderate it by the excision of the primary lesion. This ought to be done whenever the location makes it feasible. Metchnikoff has succeeded in preventing infection by the thorough application of a 25 per cent calomel ointment to parts after an inoculation with the virus and this procedure has been accepted as a prophylactic measure in several continental armies. This ointment applied thoroughly after excision of the chancre, may succeed sometimes in aborting the disease. The gummata, which were formerly con-

sidered after-effects of syphilis, and not infectious and which were treated almost exclusively with the iodides, as absorbents and eliminatives, are now since the finding of spirochetae put on the same indications as to treatment as the early manifestations. While the early lesions are of a highly inflammatory character and contain a great number of the micro-organisms, the gummata are granulomata with only few spirochetae. This, however, does not affect their infectiousness, as the successful inoculation of monkeys with gummatous tissues has proven.

To our old time friends, mercury and the iodides, a new remedy has been added, Ehrlich's salvarsan. After two years extensive use, we are able to judge the healing power of this drug. The judgment of its curative possibilities must be held in abeyance for many years, until carefully kept records permit positive statements. Salvarsan is not proven to be a greatly superior specific to mercury, except in some instances, and the routine of combining both is recommended now by a number of clinicians. Experience shows that cases of syphilis resisting mercury altogether, will improve under salvarsan and vice versa. It is difficult to explain this fact, whether it is due to different strains of the organism or due to the different reaction of the various tissues which they infest. The logical reasoning seems to be, to give the patient all possible benefit of both drugs as it is not justifiable to experiment with salvarsan alone, until its action is sufficiently known.

It is unquestionable that the effects of salvarsan in certain syphilitic lesions are remarkable. Lesions of the mucous membranes especially, usually very obstinate, yield quickly as a rule. Old ulcerations also frequently recover promptly. In para-syphilitic diseases of the central nervous system it has results only in the earliest stages. The contra-indications are less numerous now, than they were at first. Far progressed cardiac diseases should exclude its use, on account of the arterial depression which may take place in arsenical poisoning. Salvarsan contains 34 per cent of organic arsenic and as the kidneys have to eliminate a great part of it, any disturbance of their functions must be considered. Neither should salvarsan be used in the presence of non-specific diseases of the eyes.

The iodides do not exert any direct action on the germs themselves and therefore cannot come into consideration in the earlier stages of the disease. Later on they are of value by hastening the elimination of the products of syphilis. On this theory it is advisable to put the patients on the iodides during the intervals of active treatment.

With the advent of salvarsan our former routine treatment with mercury has been totally upset, without a new one having as yet been formulated. Every syphilographer experiments with his own method,

but outside of a few generally accepted facts, no definite rules are accepted at this time. It is acknowledged that syphilis needs the most intense treatment right at its start. At this time the greatest number of the spirochetae are still present in the general circulation, and are easily accessible. After some time they invade the vessel walls and the deeper tissues, and the action of the drugs is greatly handicapped. This explains why cases, which have not been treated at all or only indifferently at first, usually assume a grave character. The treatment of a case of syphilis should for this reason begin with the administration of salvarsan. This is now given almost exclusively by the intra-venous method. After acquiring the necessary skill for the surgical technic and by giving thorough attention to scrupulous asepsis, using freshly sterilized distilled water for the solution, and using the minimum amount of alkali that is necessary, the injection is as a rule not accompanied by any difficulties and is not followed by any serious after-effects. A slight rise of temperature, some nausea and restlessness are the usual consequences during the first day. Carelessness however in allowing some of the solution to leak into the perivascular tissues is followed by considerable pain, swelling and sloughing. At times it may be necessary to cut down on the vein. If for some reason the intravenous injection is not feasible the salvarsan may be given intra-muscularly in a 10 per cent oily suspension in which form it is least painful. The complications and deaths reported after the use of salvarsan are few and not greater than those after the use of mercury. Neuro-tropic affections of the eyes and ears occurring occasionally after its use are now considered to be due to stirred up specific toxins, and not to the drug, and disappear after further treatment. After the first injection of salvarsan different methods of continuing treatment are employed. Some repeat the salvarsan in full, some in fractional doses, some follow it up with mercury to finish again with salvarsan, and so on. The ideal aim of any treatment of syphilis is to remove all symptoms of the disease to prevent recurrences and secure a negative Wasserman test permanently. Believing that the first intra-venous injection reached all free spirochetae, and that a treatment is now necessary with a prolonged effect on the remaining germs in the deeper tissues, I follow it up with an intensive administration of mercury. The deep muscular injections of an insoluble salt of mercury seem to me most efficient. Twelve injections of salicylate of mercury, grain 1 each, are given every fifth to eighth day, which carries the patient's treatment well into the third month. All treatment is then stopped for four weeks, so as not to influence the Wasserman test, which is then taken. If the Wasserman is negative, it is repeated every three months during the first, and at longer intervals during the

second year, and as long as it stays negative and no evidence of the disease is apparent, no further treatment is considered necessary. In case of a return of a positive Wasserman reaction or appearance of new symptoms, the treatment is repeated. I have followed this routine lately with satisfactory results for the time being. It is open to objections, one of them, that even a long continued negative Wasserman test does not always mean a cure, but this combined with freedom from syphilitic manifestations, after a thorough and massive treatment, is at the present time, in my opinion, the only guide for putting a definite limit to the duration of treatment. The plan of giving pills of mercury for an indefinite length of time, on general principles only, does not appeal to me, being practically ineffective if the syphilis is still active and of no use if it is cured.

Local treatment of syphilis, whether of the skin, eyes, bones or the brain, may be of some assistance, but is insignificant as compared with the importance of the constitutional management of the disease. Syphilis, is at the present date, made a part of almost every specializing branch of medicine, but just the same does not represent different diseases and is, no matter in what stage it is and what organ it affects, essentially the same pathological condition, only of different degrees. Only the physician who studies syphilis in its whole aspect is able to understand it best and manage it most rationally.

TOXIC DERMATITIS.

J. Zeisler, Chicago (Journal A. M. A., June 29), calls attention to certain of the rarer etiologic types of toxic dermatitis. He reports a case of dermatitis from veronal localized on the penis and apparently due to an acquired hypersusceptibility, as the patient had previously had a tolerance to the drug. During the past two years he has had not less than twenty-five cases of localized dermatitis, mainly in the hands and face from primrose poison. With few exceptions all were women of the better class; a few were engaged in florists' establishments. In spite of a very respectable literature of this subject, many sufferers from this poisoning are still being treated as cases of eczema, and at times as recurring attacks of mild erysipelas. The cure consists in the employment of 96 per cent alcohol, which dissolves the poisonous oil, followed by soothing local treatment. The prophylaxis is the elimination of the poisonous plant. In the last few years Zeisler has observed a number of cases, mostly elderly women, suffering from dermatitis caused by hair dyes, chiefly involving the face, ears and only rarely the hands. They are otherwise in perfect health and not aware of the cause of their disfiguring dermatitis. Zeisler does not attribute it to any special hair dye. All that is necessary for relief is simple local treatment and avoidance of the cause.

THE PRACTICAL MANAGEMENT OF NORMAL LABOR.*

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Nowhere in the field of medicine or surgery is the *ideal* more likely to be separated from the *practical* than in the management of normal labor.

The ideal management of normal labor must begin prior to the final call. The patient must have been advised as to the importance of the enema, the antiseptic douche, the cleansing and shaving of the genitals, the proper dress, and the final preparation of her bed. Also, she will have procured the services of a trained nurse, who, when the hour has come, will have in readiness steriie sheets, sterile vessels, sterile bandages, and sterile water—hot and cold.

Such a case the physician assumes with an air of confidence. He arrives upon the scene just at the psychological moment and finds his good humored patient resting peacefully upon a Kelly pad. Likewise, his mind is at peace, for he knows the position, and the pelvic measurements. In short, his diagnosis is complete beforehand.

But it is the practical management of normal labor with which we have to do. Frequently the final summons is the physician's first call. And he must assume his duties as master of the situation—bold, yet delicate, resourceful and independent, but not cock-sure.

The first thing to be determined upon reaching the bedside of the patient is the possible length of time that may safely be devoted to the inspection and supervision of such preliminaries as are essential to the patient's welfare. Usually the bed has been prepared according to the owner's idea of preserving it, before the physician arrives. But no matter how thorough, nor what the character of this preparation, a few layers of newspapers should be spread over the right half of the bed, and over all a clean sheet fastened at the corners. This arrangement, in actual practice, far excels the Kelley pad, which is difficult to cleanse, and upon which it is utterly impossible to confine the patient in the throes of an agonizing labor. Moreover, the paper and the sterile sheet protect the patient from infection just as well, and it may be allowed to remain beneath her, as circumstances best warrant, for a longer period of time without detaining the physician. Having ordered water, cloths and such other things as at hand are desired, the physician should at once inquire as to the character and frequency of the pains: Has there been a copious watery discharge? Or, a mucous discharge tinged with blood? Is there any perceptible pressure against the perineum? Have the bowels moved recently? What of

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kidney action? Dropsical effusions? Headaches, or other nervous phenomena?

Whilst these and various pertinent questions are in progress, the gloves, of course, are boiling. And, when the pulse has been noted for future reference, and the external examination of the abdomen is completed, the hands are sterilized, the gloves drawn on and lubricated with green soap tincture, or dipped in sterile water, and the internal examination is begun.

The genitals having been thoroughly cleansed with hot water and soap, the patient now lies upon her back, between two clean sheets, with knees half drawn, and the physician, at the patient's right, very carefully introduces into the vagina the index finger of the right hand, or, the index and middle fingers, if there be difficulty in reaching the os uteri.

Unless there has been a previous understanding, or the physician is well acquainted with his patient, there should be no attempt to shave the pubis at this time. But at the termination of labor it may be advisable so to do; and it is always wise, looking to the future, to take advantage of the opportunity and impress the patient, as concerns herself and safety, of the vast importance of such a procedure before hand.

Continuing the examination, the physician determines the extent of dilatation of the cervix uteri; the density of the os; the presentation; the position; the condition of the perineum; of the vagina, and the pelvic walls.

This examination is to be conducted in the interval between pains, but should not be terminated until the physician, with his finger against the cervix, has familiarized himself with the force and character of the pains.

If dilated sufficiently to permit of it, the finger should also be carried around the internal rim of the os to ascertain whether any part of the placenta is attached to the lower segment of the uterus.

Unless placenta previa, or a transverse presentation is diagnosed, it is generally not necessary to remain with the patient during the early part of the first stage of labor. The pains in this stage, however, frequently cause more suffering and impatience than any other part of labor, owing to the dilation of the cervix. It is well to explain this to the patient, and to impress her with the fact that delivery cannot possibly occur until the parts have dilated sufficiently to allow the body of the child to pass through them. This positive knowledge successfully imparted may prove a valuable asset in the later management of the case. Suppose, for instance, the head is large, the bones of which are not always readily compressable; or, suppose the head is unusually

small, the upper strait rather large, and that there is a great quantity of liquor amni in an unruptured sac; or, again, suppose there is a faulty presentation, a face presentation, let us presume, with a tendency for the chin to rotate to the back—or any other of a number of things that may hinder the progress of normal labor, and require time, patience and a skillful operator to correct. Some explanation will be demanded by the patient after a series of hard, tedious pains have occurred with no apparent progress. Should she be informed of the exact condition of affairs? Certainly not! The husband, or other member of the family in charge, may be quietly informed, but, diplomatically, the patient should be reminded, from time to time, of the fact that labor may be perfectly normal and yet the first stage long drawn and tedious, which will quite likely be inferred as a reference to the former explanation, thus dissuading fear, whilst trust and hope inspire the mind of the suffering woman for another period during which the difficulty may reach a happy termination.

Much consideration is due the feelings of the patient, especially she who is in labor for the first time. The necessity of a proper toilet, and the digital examination should be kindly explained, and there should be no unnecessary exposure of her person, yet nothing neglected that is deemed essential to her safety or welfare. Confidence and esteem thus once established she will willingly submit to subsequent examinations at such intervals as the physician may suggest.

The frequency of these examinations will depend upon the diagnosis and apparent progress of the case. The second examination, however, should always be made within an hour, or as soon as a series of pains have occurred.

If the patient has been in labor more than three hours, and dilatation does not exceed a silver half dollar, the physician may leave the patient for an hour or so, provided he keeps within telephone call, and at no great distance from the case, so that, should his services be desired for any reason, he may return at once.

When dilatation is complete, or nearly so, the membranes should be ruptured, if the amniotic fluid has not already escaped. To accomplish this act, some such instrument as a uterine sound or a dressing forcep may be used. Or, when the sac is made dense by pain, the finger may be drawn across it with sufficient force to cause its rupture. Neither of these methods, however, is entirely satisfactory since the first is liable to cause more or less discomfort to the patient, whilst the latter frequently results in a torn glove. To obviate these disadvantages I am using a thimble—not just exactly the kind of thimble that your grandmother used to use, but one of a similar design. It should be made of aluminum and fitted at the end with a blunt, raised

edge, the impress being that of the natural finger's end. This thimble is sterilized along with the gloves, and, when needed, is placed on the index finger whereupon the operation is easily performed without exposure or discomfort to the patient, and without arousing within her the fear of an impending operation; and, also, without injury to the glove.

As soon as dilatation is complete the so-called second stage of labor should begin, and may terminate with a single pain. This, however, rarely occurs, but everything (such as tape, scissors, napkins, hot and cold water) should be in readiness for such an emergency.

From now on, unless there be uterine inertia, or other causes prevent the head from readily entering the upper strait, the patient should remain in bed. She should lie upon her back, near the right side of the bed, with legs flexed and knees apart, the right one resting against the physician's shoulder, who should constantly remain by the patient's side, whilst the left knee should be supported by an attendant opposite. If propulsion is delayed, the woman should be encouraged to avail herself of the aid of the abdominal muscles. She should be admonished to hold her breath, to grasp the hands of the assistants and to "bear down," and to tip the bottom of the pelvis up. To accomplish the best results, the physician must direct these efforts, not at random, as a midwife would, but in accordance with the immutable laws of nature, the positive rules of science, which have to do with force, body and resistance. This can be only successfully achieved by a thorough knowledge of the action of each pain. Therefore, the physician will direct these efforts, as above stated, by introducing the index and middle fingers into the parturient canal at such intervals as the case may warrant. If the pains occur at frequent intervals, as is usually the case, he should not withdraw his fingers at the conclusion of each pain, but in the interval between pains moderate pressure against the anterior lip of the os should be maintained to obviate the oedematous condition which frequently occurs as a result of pressure of the anterior uterine wall between the head and the symphysis pubis. It is impossible to push the anterior lip of the os over the head with safety, but pressure continued in this manner materially aids the head in passing down.

As soon as the head enters the pelvic canal, the patient should desist from every voluntary effort of propulsion. She should be encouraged to cry out rather than to "bear down" when the pain comes on, and, if evolution is rapid, digital examinations should be frequent or continuous in order to have a proper knowledge of the progress of the case.

When bulging of the perineum occurs the head should be pressed

upward under the pubic arch. If blanching with marginal hemorrhage occurs at this time, there is eminent danger of a laceration, and, with the hand against the perineum, the head should be held back during the pain to allow the external orifice of the vagina to dilate. In such cases, and, in fact, in almost every case, artificial dilation may be accomplished by pressing the perineum against the sacrum, and thus delivering the head between pains.

If the cord is about the neck, it should be slipped over the head at once. Then with the next pain, the hand still supporting the perineum, which most often tears when the shoulders pass, the shoulders are directed upwards against the pubic arch, and the child is delivered.

The cord is tied in two places, the nearest being an inch from the child's abdomen, when respiration is established, or as soon as the cord has ceased to pulsate. The stump is protected, as soon as severed, by wrapping it in absorbent cotton. Then the baby is given over to the nurse, or other attendant, and the physician, grasping the fundus of the uterus, or placing his left hand over it, makes intermittant pressure to encourage the contraction of that organ. As soon as this occurs, which will be but a few minutes at the most, gentle traction should be made on the placenta by hooking the finger into the edge of it, and urging the patient to make such efforts as were necessary to engage the head in the superior strait. And, as the placenta is thus being carefully delivered, the membranes are twisted into a rope to avoid their being torn off and left behind.

Then the top sheet and newspapers under the patient should be removed, if there be no hemorrhage, and a hot, wet sterile cloth placed over the vulva, and the legs extended, the thighs being kept close together.

The abdominal binder is necessary only in case of laceration, and its application should be optional with the patient. She should be vigorously admonished, however, to procure a proper fitting abdominal supporter for use after the lying-in period, which should be worn, during the daytime, for the first six months. If there is any tendency to hemorrhage a teaspoonful of the fluid extract of ergot should be given as soon as the placenta has been delivered. Then, if she desires it, a little water, milk or tea may be given her, after which she should remain quiet for a number of hours.

But the physician's duties in connection with the management of a case of normal labor do not terminate with the delivery of the child. Furthermore, he is held responsible, in the eyes of the public, for the ultimate recovery of his patient. Therefore, as soon as the nurse has attended to the dressing of the infant, and the patient is sufficiently comfortable to give her mind to his remarks, the husband, the nurse

or other principle attendant, and those who have assisted at the bedside, should be called to attention, that such instructions as are essential to the patient's welfare may be thoroughly established.

First, commend the patient for her courage and fortitude, and, as a small reward for the pain she has endured, exchange the sterner air of one who commands and expects to be obeyed for a little tender sympathy. It does good.

Then, assure your patient of her splendid condition, assuming such to be the case. Make it thoroughly known that trouble is not anticipated, but, that certain rules must be observed to insure her recovery.

Then, directing your discourse to the attendant, make it plain that the patient must not be disturbed for at least ten hours; that she must not be left alone; that she must be kept well covered to prevent a chill, which, although not dangerous, is always alarming to the patient; that the antiseptic pads should be changed as often as desirable, and the soiled ones burnt; that, should there be an unusual loss of blood, the foot of the bed is at once to be elevated, and pressure maintained over the lower part of the abdomen until the physician arrives; that, at any time the patient desires to urinate, the bed pan is to be carefully placed and the act encouraged; that, should the patient fail to empty the bladder after repeated attempts, over a period of sixteen to twenty hours, the catheter must be used; or, should there be no desire to urinate on account of a bruised bladder, the act should be encouraged at intervals from ten hours on; and if, at the end of twenty hours, the bladder remains filled the catheter must be used regardless of desire.

Do not advise a cathartic under forty hours. If necessary, use an enema to evacuate the bowels before that time.

Don't fail to advise the patient concerning the care of her breasts. Insist upon the use of a breast pump at regular intervals beginning with the third day and continuing for at least three weeks.

Finally, having advised the patient as to diet, the first care of the baby, and of the vast importance of procuring medical aid as early as possible, should she suffer from a hard chill, a high fever, and a tender, distended abdomen after the second day; and, further, having noted the condition of the pulse, and delivered such other instructions as are in keeping with the cause, the physican may thank his patient for the call, and go his way with small probability of further need of his services in the case.

In conclusion, I wish to direct your attention to a few salient points in the practical management of normal labor:

(1)

If you accept an obstetrical call, you have entered into a legal contract. Therefore, respond immediately.

(2)

The physician never knows which will be needed most, whether gloves, gauze, cotton, needles, sutures, forceps, speculum, curette, chloral hydrate, chloroform, iodine, ergot or green soap. In short, don't neglect the obstetric bag.

(3)

Don't guess at anything. Make a thorough examination as soon as possible. Make subsequent examinations as often as necessary to keep you in proper touch with the case.

(4)

If opportunity presents itself, examine your patient at about the eighth month. Unless you are positive that no deformity exists, use the pelvimeter. Also, determine the presentation and position, if possible.

(5)

If your patient will willingly submit, shave the genitals, and scrub the vulva with soap and water. Then bathe the parts with a warm antiseptic solution.

(6)

If it positively known that specific infection exists, first, cleanse the vagina with a hot antiseptic solution, then use a prophylactic for ophthalmia neonatorum.

(7)

The patient's dress should consist of but two garments: first, a folded sheet pinned loosely about the upper abdomen, so that when she stands it will fall to the knees with the lap in front. Second, a loose fitting gown with long sleeves and high neck, open at the back. The gown is folded over the chest during the second stage, and the sheet is removed at the completion of labor.

(8)

If, after a series of pains, the os does not dilate, give a half grain of morphine hypodermatically. After the effects of a large dose of morphine, the uterus may expel the foetus in two or three hours.

(9)

As a rule, do not use chloroform, even in forceps cases. The morphine is nearly as good, and much safer.

(10)

Next after presentation, position is the first thing to be determined in labor.

(11)

If faulty rotation cannot be rectified with the fingers, use forceps.

(12)

Extension should be complete to lessen the danger of laceration.

(13)

Deflective extension more often results from an unruptured sac

than from uterine inertia. Rupture the sac as soon as dilatation is complete and shorten labor from one to twelve hours.

(14)

To determine whether the placenta is adherent: As soon as the child is born, compress the cord firmly six inches from the child's abdomen, with the thumb and finger of one hand; if detachment is complete, or nearly so, pulsation on the placental side ceases immediately.

(15)

The completion of labor begins with extension.

(16)

As soon as respiration is established, tie the cord and keep the baby on its right side.

(17)

The oozing or hemorrhage that follows delivery is generally due to the detachment of the placenta, either partial or complete.

(18)

In 19 out of 20 cases, the placenta will be found protruding from the uterus into the upper part of the vagina as soon as the child is born. Make no traction on the cord, but, with the first firm contraction, hook the finger into the edge of it and deliver. This operation requires but little force, and should be completed in from one to fifteen minutes.

(19)

In the twentieth case, the placenta will be found either wholly within or without the uterus. If wholly within, maintain as firm contractions as possible, to control oozing or hemorrhage, and wait until the uterus begins to eject the placental mass into the upper part of the vagina, then deliver at once. The time required in such a case will be from fifteen minutes to two hours.

(20)

Do not attempt to pass a catheter, after delivery, without ocular supervision.

MAKING HISTORY.

Paul Revere was exceeding the speed limit.

"You can do it this once to save the country," said the local constable, "but if this occurs again the country can go to the dogs."

Life.

A JOKE FROM PUNCH.

Goldstein (a newly made country gentleman who is visiting the village school.—"Now, can any one of you boys tell me what nothing is?"

Small voice (after long silence).—"Please, zur, wot you guv me for 'oldin' yer 'orse yesturday."

THE OMENTUM IN ABDOMINAL SURGERY.*

C. E. RUTH, M. D., DES MOINES, IOWA.

Having seen so much, of late years in various journals, regarding the avoidance of adhesions resulting from abdominal operative procedures, by the use of various devices and materials, among which "Cargyle membrane," sterile oils, and water, have played a prominent part, I have been astonished to note the small amount of consideration given to the omentum.

Every surgeon must frequently have noted what service the omentum has rendered in forming adhesions to a supurating appendix, perforating intestinal ulcer, ulcerating biliary calculus—over a weakened gall bladder or duct, adherring to, or enveloping entirely, a dangerous point of infection, and keeping it localized until sterilization of the infected Fallopian tube, or other area, occurs from confinement of the germs a long time in their own excreta.

Straightway the surgeon forgets this same membrane which a wise providence has placed over the intestines and other abdominal viscera as a protection against the myriads of dangers to these organs, and that it has saved more lives than all surgeons in the world.

(a) That it is not a foreign body.

(b) That it can be entirely removed without danger to the individual, in case of need, (further than the loss of its protective power).

(c) That it is used by nature in all conceivable ways to save the patients life until nature, or a surgeon can bring relief.

(d) That it can be used to cover all, or any, raw or infected surface in any part of the abdomen, to prevent adhesions of dangerous structures whose functions might be impaired by contracting adhesions.

(e) That it may be cut entirely free and grafted into any part of the abdomen with greater safety and less burden to the tissues than any foreign material, however elaborately prepared.

(f) That it can be used to cover any weak suture line.

(g) That after having served its purpose as protector, the adhesions which fixed it in place during the danger period will largely disappear by absorption.

The above mentioned capacities of the omentum being well known to every surgeon, why should anyone think for a moment of looking elsewhere when here is all that is ever needed in any case in great abundance, and it has proven its capacity often in the very case where the surgeon is looking for some specially prepared foreign material to replace this old, tried, his and the patients best friend, in the preventing of or limiting dangerous adhesions.

*Read before the Des Moines Valley Medical Association, June 22, 1912.

In severe intra-abdominal infections, we sometimes find almost the entire omentum being used to wall off a dangerous infection and it is so skillfully done that often not an important function has been disturbed save that which resulted from the infection itself.

During the last sixteen years we have removed the entire omentum, together with a large ovarian tumor, in one case, in which it was found infected with tuberculosis and the patient suffered not the slightest inconvenience from its loss in the two remaining years of her life. We have used the omentum unhesitatingly in many cases to form drainage channels, sutured it fast to a dangerous or damaged area to prevent contact of intestines or other parts where the contact might cause damaging infection or adhesions, and have drawn down the omentum and sutured it in place over an entire pelvic inlet which presented infected and denuded areas, thus holding back the small intestines from contact with the dangerous area while securing adhesion of nature's own protector where no harm could result from its attachment and put no extra burden upon an already overloaded mechanism by the introduction of some dead or other foreign material. In the same way we have used it to protect any point of apparent danger or weakness whatsoever, without, in upwards of seven thousand abdominal sections, being required to re-open the abdomen for the relief of intestinal obstruction on account of post-operative adhesions. In some of our cases adhesions were so extensive that on opening the abdomen no normal anatomical land marks could be seen necessitating very extensive separation of adherent parts and yet we have never used any other material than the omentum in protecting or recovering denuded or infected surfaces.

Many surgeons seem not to realize the danger of traumatizing the delicate endothelial surface of the abdominal viscera by

(a) Exposure.

(b) Rough handling.

(c) And particularly by the simple contact of dry gauze, which often causes so much damage to the traumatized delicate endothelial surface that it will immediately adhere to any other peritoneal surface so injured, if allowed to rest in contact with it. If only warm, moist gauze, freshly wrung from hot normal salt solutions were placed in contact with the delicate endothelial peritoneal surface with the minimum of friction much less tissue would be in condition to contract post-operative adhesions. Visceral exposure must be minimumized as well as contact, friction—trauma and the operative time must be reduced to the minimum to give the greatest protection.

The hollow abdominal viscera after general anesthesia are liable to be more or less paretic for some hours, thereby favoring the contrac-

tion of adhesions between visceral surfaces whose endothelial linings lying in contact have suffered greatly and may form dangerous adhesions, though there was no infection whatever introduced during the operation nor brought in contact with the surfaces during operation.

On the other hand, no raw sterile endothelial surface will contract adhesions to another surface whose endothelium has not been injured by trauma or infection. Therefor, I am entirely at a loss to see what place any such thing as artificially prepared membrane, oils or other liquids can have in abdominal surgery for the prevention of dangerous adhesions following capable abdominal surgery.

We are under every moral obligation to reduce trauma and adhesions resulting therefrom to the minimum and thereby lessen the post-operative complications notwithstanding adhesions are the normal result of all repairative processes in wounds, excessive trauma and infection of the peritoneum. Our experience has convinced us that post-operative intestinal obstruction and other grave complications resulting therefrom should be extremely rare.

INFANT FEEDING.

The principles of infant feeding as carried out by Finkelstein and used in the dispensaries of the United Jewish Charities, the Franklin Street Settlement and the Salvation Army in Detroit are described by D. J. Levy, Detroit (Journal A. M. A., June 22). They are: "(1) milk dilutions instead of percentage formulas. (2) long feeding intervals: five feedings in twenty-four hours, four hours apart; (3) mixed carbohydrates; the addition of 10 gm. of flour and the use of oatmeal water as diluent; maltose dextrin as sugar; (4) limiting the total quantity of milk mixture to 1 liter (1 quart a day); (5) the employment of broths, fruits and vegetables from the sixth month on." The least intelligent nurse can prepare a proper milk mixture, and the longer feeding intervals give rest to the mother and induce regular habits in the child. Breast nursing should never be given up until it is absolutely necessary. Levy thinks that when that occurs it is better to give one-half milk instead of one-third and increase to two-thirds milk after the first six months of life. The employment of broths and fruits and vegetables in the infant's diet is usually not sufficiently emphasized.

A CHEESE.

The physicians were holding a consultation beside the cot of the man supposed to have appendicitis.

"I believe," said one of the surgeons, "that we should wait and let him get stronger before cutting into him."

Before the other prospective operators could reply, the patient turned his head and remarked feebly:

"What do you take me for—a cheese?"

SURGEON LISTER.

H. O. WILLIAMS, M. D., OTTUMWA, IOWA.

Instead of formulating an epitome of medical and surgical progress during the last year, allow me to go back into the last century. This seems pertinent from the fact that on February 11, 1912, at his home in London, Baron Lister died. He would have been 85, April 5, 1912. This title of Baron seems empty to us, but it is a rainbow that all England chase.

We know him as a surgeon, and all the honors and titles royalty could confer on him, neither enhance nor diminish our estimation of him.

He was a man of great scholarly attainments, graduating with the degree of A. B., at the age of twenty, from the University of London. He then entered upon a five years course in the London University Hospital, following with a two years internship, then in 1854 he went to Edinburg, and for the next six years was a resident surgeon under the great Syme. He became a teacher early in life, but his great fame as founder of antiseptic surgery has obscured the fact that he was prominent in his day and age as a surgeon and recognized the world over as a pathologist.

The surgical world was now ready for antiseptics, the man appeared to exploit it. The forerunner of Lister was Louis Pasteur, the greatest scientific worker and discoverer of any age. Had he been a physician, instead of a chemist, doubtless all of Lister's fame would have been his also.

In 1860 he demonstrated that boiling water in a few minutes destroyed many germs, that prolonged boiling, nearly all germs, that the sporules were very resistant, but that steam under pressure of one and one-half atmospheres in 90 minutes would destroy them, thus rendering all things absolutely sterile.

These findings were also made subsequently by innumerable independent investigators. He forever settled the question of spontaneous generation, previously universally accepted and proved conclusively that sterilized organic matter would neither ferment nor putrify so long as it were kept germ free. In this is now readily seen the basic principle of our sterilization of today. His protective innoculations in the early seventies with attenuated cultures of contagious diseases, laid the foundation for antitoxines and serum therapy.

His work was done so well and thoroughly, with such wonderful accuracy that the years of subsequent research and investigation have only confirmed their eternal truth.

The benificence accruing to mankind from these labors exceed one

hundred fold that of any other since the days of Aesculapius. The application of these findings in medicine and surgery have advanced the span of life ten years.

No sooner had Pasteur in 1860 published his findings relative to fermentation and putrefaction, than did Lister now Professor of Surgery in the Royal Infirmary of Glasgow, advocate that erysipelas, hospital gangrene, pyaemae, and puerperal fever were all extrinsic not intrinsic from bile or phlegm or humors of the blood but from a low form of plant life that found ingress from hands, instruments, sponges, or the air. He advocated a propaganda of cleanliness and taught it with great eloquence. He recommended Phenol as his antiseptic unsparingly in all his surgical work; not only in cleansing everything but used a spray playing over the field of operation until the wound should be closed by a heavy compress moistened with the same. Each subsequent dressing was to be made under the same spray. At a meeting of the Bristol Medical Convention at Dublin in 1867 was first proclaimed to the world antiseptic surgery by Lister, who now unfolds his plans of operation and tabulates results. These ideas were new, startling, revolutionary.

The medical profession is conservative, no great theory has ever been accepted without opposition. Harvey and Jenner went down into the grave almost without honor.

A few years ago the great Dr. McCosh with a little pleasantry thought to annihilate completely the findings on evolution, when he remarked that possibly Darwin's ancestry might be Simian, but as for himself there was no monkey blood in his veins. Every pulpit throughout the land caught this facetious refrain, and re-echoed it. But everything and all things must soonor or later conform to known truths.

Genius from high places discerns the light, long before it filters into the perceptive faculties of mediocrity. Such must always be the rule so long as men possess different insight.

Of all slow thinking peoples, the English are proverbial. A prophet is never appreciated at home. English speaking people paid little or no attention to this great address, but France and Germany took it up at once with great zeal and put into practice its propaganda, and only later, did England and the United States become converts through tutonic sources. The younger men in the medical profession first began to put this system in use. As a rule the older men sneered at it and absolutely refused to give it a trial.

In May, 1875, at a session of the British Medical Association a paper read by Savory of Saint Bartholomow Hospital says, "The principles as announced by Lister are sound but narrow, and in practice better results are shown by other methods. The fact that this method

prevents the formation of pus is of little weight, as healthy pus upon granulating surface is a favorable sign."

In 1880 Lawson Tait says of Listerism, "It is the largest, best blown, and most attractive bauble ever displayed to a surgical audience." He says in 1884, "I am just closing my thousand adominal sections, and in the future shall not trouble myself a brass farthing about Lister or his advocates."

In 1886 Surgeon Frank Hamilton wrote a masterly paper for publication in the New York Medical Record, in which he completely annihilates Listerism. He says "I agree with Mr. Tait that increased personal experience and increased attention to all minute details, go to create success. His simple narration of his experience, his acknowledged integrity, his abundant testimony, ought to dispose forever the much discussed question of Lister."

Hamilton adds "I wish to say that while it seems to me capable of demonstration that the real secret of Mr. Lister has lain concealed under a series of complicated manipulations, my confidence, in the intelligence of my professional brethren is such that I believe that they will soon abandon all these procedures which are irrevelant and wholly unnecessary to success, and this they are doing. Keith, Collander, Savory, and Bryant have all decided their non-acceptance of Mr. Lister."

In the face of such able opponents it is no wonder that it required forty years for these precepts to become generally accepted. On the other hand there were many able exponents, Professor Nausbaum of Munich, a strong advocate of Listerism in 1880 in a public lecture says, "There ought to be a statute in the general penal code, punishing a surgeon who should examine any wound with a finger not properly disinfected."

Esmark of Kiel, Schede of Hamburg and other eminent German surgeons and almost all French surgeons were in the late seventies or early eighties using a system of asepsis and antisepsis.

In 1888, Senn of Milwaukee, Parks of Chicago, Kieth of Philadelphia, and McBirney of Roosevelt Hospital, New York City, were all attempting to carry out Lister's teachings.

In the same year at the University of Pennsylvania Hospital, Ashurst and Agnew, and at Jefferson, Gross Jr. while at New York City, in Bellevue Hospital, Bryant, Hamilton, and Valentine Mott Jr. were all as oblivious of Listerism as were Bell and Cooper nearly a hundred years previous. But a generation of aged conservatives passed away and an era of progression was ushered in, and by 1895 no surgeon of any reputation anywhere in the civilized world was operating without the most strenuous efforts to apply the great principles enunciated by Lister.

We look back with horror at the terrible ravages played by sepsis before the seventies, and view the gradual victory over this monster. Today the medical profession holds the operator responsible for infection in clean cases, and doubtless the time is not far distant when we shall be held amenable for damages in court for our remissnesses along these lines.

Lister was a gentleman, a scholar, a thinker, and an indefatigable worker, an orator—too busy to write more than short monograms—mild mannered, non-assertive, readily giving to others their full mead of praise. Publicly and privately, he acknowledged his great debt to Pasteur, who had formulated the truths which he had so quickly grasped and so successfully applied.

He lived to see the complete triumph of his precepts, the full fruitation of his labors.

Had he been more aggressive, he would have more speedily come into fame, but the light he shed grows brighter and brighter day by day and untold generations yet to come shall arise and call him blessed.

A GROUCH'S STORY.

A couple of old grouches at the Metropolitan Club in Washington were one night speaking of an old friend who, upon his marriage, took up his residence in another city. One of the grouches had recently visited the old friend, and, naturally, the other grouch wanted news of the Benedict.

"Is it true that he is henpecked?" asked the second grouch.

"I wouldn't say just that," grimly responded the first grouch, "but I'll tell you of a little incident in their household that came within my observation. The very first morning I spent with them, our old friend answered the letter-carrier's whistle. As he returned to us, in the breakfast room, he carried a letter in his hand. Turning to his wife, he said:

" 'A letter for me, dear. May I open it?' "

July Lippincott's.

THE PACE THAT KILLS.

"Oh, look, mamma! The Swifts have a new chauffeur."

"Yes, dearie; the old one couldn't be repaired any more."

Judge.

MALIGNANCY.*

G. W. HINKLE, M. D., HARVARD, IOWA.

I will again take up the study of the blood cell along the same lines that we proceeded in my previous papers on the subject of "Malignancy" which I presented for your consideration.

The study of the minute structure of the blood cell and the tissue cell becomes more fascinating and instructive as we proceed toward the ultimate atom enveloped all so snugly and firmly in that beautiful halo of mystery, cell life or animal life.

This cell life must have a physiological cell in which to preside in order to build up and maintain a normal or healthy system of cells which we call the body.

When there is a pathological cell in which this cell life has to preside, there is an abnormal or unhealthy system of cells or a maimed or a diseased body.

It is impossible to separate the different physical structures of the cell sufficiently to analyze in isolation the chemical constituents of the cell membranes, cytoplasm, nuclei, and nucleoli to know the chemical differences that exist between them.

We know there are differences as has been shown by the microscopist and chemist, in the micro-chemical reactions, and by studying their physico—chemical relations to one another we have learned some facts about the structural elements of the cell and their relation to the composition of the entire cell.

The process of metabolism within the cell is carried on by a chemical body or bodies called enzymes which keep the cell in a healthy condition by appropriating the cell food and applying it in such manner that cell life is furnished with a machine which it can operate with the greatest efficiency.

The enzymes are similar in chemical composition to the proteids and nucleo-proteids of the cell constituents, if not actually identical, so that in studying the conduct of the enzymes we are not looking toward new chemical bodies so much as we are toward a condition of the varied chemical composition of the ever present proteid compounds.

The conduct of the enzymes within the blood cell is to maintain a healthy cell or an unhealthy cell, determined by the degree of departure of the chemical composition from the narrow zone which is necessary to provide a perfect machine by which the Queen Ruler "Cell Life" may secure a normal or healthy cell.

Just as we find the composition of the contents of the blood cell departing from the normal zone, we find an unhealthy condition reflected from all the tissue cells of the body.

*Read before the Wayne County Medical Society.

A weak, sick, or maimed blood cell will produce a weak, sick, or maimed tissue cell and as the blood cell selects, prepares, and carries the proper chemical food for each tissue cell, there would be a specific disease of the tissue cell as positively and in accordance with the disease of its fountain head of supply as that fountain head is wholly or in part diseased.

Every cell is continually making a great number of chemical reactions of many different kinds, and, at the same time, and reactions take place between substances that do not affect each other outside of the body at all or with great difficulty in the laboratory.

Sugar is being constantly oxidized into carbon-dioxide and water which, if brought about, outside of the body would require high degrees of heat or the action of powerful chemicals.

Proteids are broken down into urea, carbon-dioxide, and water, but to do that outside of the cell would require the use of concentrated acids and superheated steam under great pressure.

This work with many other equally difficult chemical changes is all going on at once within the cell walls, but always keeping the heat within a fraction of a degree of normal.

The enzymes are the forces which in great part control the conduct of the cell products by bringing about the chemical reactions, diffusion, osmosis, and their modification by the cell structure.

True enzymes are never found only as a result of cell life—they are produced within the cell and they are present in every living cell, and, as we know the same fact is true of the proteids and not true of any thing else, we may conclude that enzymes are proteid conditions and not separate bodies.

The chemical bodies or conditions which we call enzymes are the workers in the process of metabolism throughout the entire body and are not all of the same composition, but are chemically formed so that a certain enzyme will have a certain work to accomplish and that a region of the body will have a specific enzyme to complete metabolism in that region.

The enzymes are or may be food, food carriers, sentries, guardians, scavengers, or bandits, depending upon the chemical composition and location in the body and always controlled by the law of natural selection originating from a chemical standpoint or chemical attraction.

Enzymes may be divided into two classes—one of which builds up and the other tears down the cell and its contents; one prepares and places new brick in the building and the other removes them when they are worn out so that when in a normal, active state they balance each other in the work of metabolism and secure health.

All enzymes are most active at a temperature of between thirty-

five and forty-five degrees centigrade and are destroyed at somewhat below seventy degrees when in moisture, the loss of power disappearing gradually as the heat increases until their action disappears.

Sunlight when long continued tends to destroy enzymes when in solution and in the presence of oxygen.

Radium and X-rays have a destructive effect upon most enzymes and interfere with their rate of action, except the autolytic enzymes which are not injured by these agencies.

The electric current when applied in excess causes a loosening of the cohesion and a solution of the constituents of the cell because of direct chemical alterations being caused by a migration of ions toward one or the other pole of the cell which separates the movable, inorganic ions of the ion-proteid compounds from the immobile, colloidal, proteid ions.

In order to produce and maintain a healthy cell it is always positively necessary to exactly fulfill two conditions within a very slight variation from the normal line, that is, cell food material must be supplied in proper amounts and kind and at the proper time and the cell must receive the proper amount and influence of the imponderable agents heat, light, and the electric current.

We know that the constituents of the cell are formed by chemical action upon the food material which is brought within reach of the cell; that the proteid and enzyme bodies are found in every living cell; that no chemical action takes place within the cell without the proper influence of heat, light, and electricity.

We also know that chemical bodies are formed within the living cell which, as yet, the chemist is unable to make outside of the cell which leads us to believe that the Great Queen Ruler "Cell Life" who does so wisely preside over her cell dominion does command and greatly assist in the making and maintaining of the living cell.

We know that the elements or component parts entering into the chemical formation of the bodies grouped under the headings of proteids, lipoids, salts, and water are made up by the chemical union of the atoms of oxygen, hydrogen, nitrogen, and carbon and the molecules of the various salts of potassium, sodium, calcium, magnesium, and iron.

Since modern pathology was founded the unit of all chemical considerations of disease, as well as of health, has been the cell and it has occupied a fundamental position in those considerations, until recently the pathological and physiological chemist has been advancing up through the chemical contents of the cell to the molecule and toward the ultimate atom and the nucleolus.

The many different chemical substances found within the cell are each acted upon by the others and by the different agents heat, light,

and electricity yet the reactions are all profoundly affected by the environment which is determined by the structure of the cell.

The why and the wherefore of the structure of the living cell can not be analyzed or measured by the chemist, pathologist, or physiologist, so we must conclude that the Queen "Cell Life" is the chief architect and rules exclusively within the realm of the structure of the living cell.

If the cytoplasm be disconnected from the nucleus it does not build a new nucleus or appropriate the cell food but a chemical retrogression is at once inaugurated and the enzymes become toxic or proteolytic resulting in complete cytolysis or death of the cytoplasm.

If the nucleus be so separated from the cytoplasm it will at once proceed to build up a new cytoplasm by appropriating the cell food provided for it, thereby, declaring that within the nucleus or nucleoli resides the commanding power, cell life, that rules the work of building the cell structure.

The foundation stone upon which rests the chemical structure of the cell is the atom of the various elements entering into the formation of the cell food.

All chemical action begins with the atom first, from which is formed combinations called molecules and from those are formed the various chemical bodies which enter into the formation of the cell.

In the study of the formation of the cell we are almost compelled to recognize cell life as being the ultimate influence from which flows the power that builds the cell and that the atom is the ultimate matter from which the cell is built.

All atoms are ions, either cations or anions, and will, in the presence of a current of electricity, travel toward either the negative or positive pole, in doing which, there will be a chemical action started which will result in the formation of chemical bodies either good for the cell or bad for the cell in accordance with the strength of the electric current given.

If the amount of the electric current is too small the resulting chemical body will be abnormal for a healthy cell and if the current is too large the resulting chemical compound will be more or less vicious and either condition will produce an unhealthy or diseased cell.

Heat and light, either or both, when appropriated in too small or in too large quantities will retard or accelerate the chemical action within the cell and aid in changing the enzymes from a benign to a malign condition with a resulting diseased cell.

A diseased blood cell can not keep itself able to do its allotted work toward building up and maintaining the tissue cell in a healthy condition, but must necessarily impart to it a diseased condition similar to that of its own.

I believe that all malignant processes arise within the blood cell as a consequence of a disturbed metabolism, whereby toxins are formed and projected by a faulty chemical action, induced by an inadequate supply of cell food and the influence of heat, light, and electricity.

The enzymes of the diseased blood cell represent more or less a toxic, chemical body instead of a true enzyme, thereby changing the equilibrium so necessary to control and carry on the processes of digestion, assimilation, and elimination in a manner to maintain a well cell.

The pathological condition of the cell is carried to every tissue cell of the body and leaves its impress upon every receptive nook and corner of the animal economy as unerringly as chemical attraction attracts.

A blood cell may be sick or diseased long before there is a manifestation of its condition shown in any other part of the body, but unless the thing we call nature does not soon repair the injury there is a specific reflection noticeable somewhere outside of the blood cell.

I believe a cell is diseased in such manner that a patient may have consumption long before he has tuberculosis, that he only has tuberculosis because the diseased blood cell is unable to dislodge the Tubercle Bacilli, and that this disease of the cell is specifically consumption and nothing else and can not cause any other disease of the body.

I believe that the disease of the cell which allows the cancer cell to grow in any part of the body is only carcinoma and cannot cause any other disease of the body, but always will allow the cancer cell to grow as surely and positively as atoms do chemically attract each other.

Perverted chemical action within the blood cell is the cause of all malignant diseases, each perverted chemical condition within the cell causing its own certain malignant disease and none other first, last, and all the time as surely as two and two are four.

TWO OF A KIND.

"I have a fishing boat and a chauffeur that are both in the same class."

"How do you mean?"

"I am always bailing them out."

Baltimore American.

IN LIEU THEREOF.

"The children need something new every week. You have no children, hence you can't understand."

"I understand, old chap. I have an automobile."

Louisville Courier-Journal.

CHOLECYSTITIS AND CHOLELITHIASIS IN THEIR RELATION TO PREGNANCY.*

LAURA HOUSE BRANSON, M. S., M. D., IOWA CITY, IOWA.

An Extract.

Etiology and Entrance.

That the etiology of cholecystitis depends on bacterial infection is the generally accepted opinion; and it is believed that cholelithiasis may result from cholecystitis, and that cholelithiasis, having once become a condition or lesion, may then become a factor in the production of cholecystitis. * * *

Infection.

These etiologic infections may be mixed or simple; if mixed; one organism may prevail today and may die out, and another organism take its place tomorrow. Hence, a gall-bladder may at one time contain sterile bile, and at another time not so remote it may contain non-sterile bile; in such instances, the primary infection may escape observation. Consequently, diagnosis based on sterility or non-sterility of the bile may be misleading, if not positively erroneous. * * *

From whatever source these bacteria may come, it is safe to say that if anything hinders their passage through, or their filtration from the liver, their place of refuge and their abiding place from that time on is the gall bladder; and while we do not know the precise function of the gall bladder, we do know that it serves as a general rendezvous for these nomads.

That there is a difference of opinion as to the real functioning of the gall bladder is evidenced by the following: Mayo writes as follows: "The gall bladder is important as a means of protection, especially to the pancreas, and should not be removed unnecessarily," Kehr makes the following statement: "The gall stone operation is practically free from danger and the loss of the gall bladder causes no appreciable disturbance."

While the infecting agent is the primary factor in the etiology of cholecystitis and cholelithiasis, there are secondary factors that must be taken into consideration; these may be anything that reduces the power of the gall bladder and biliary ducts, or interferes with the free flow of bile.

Symptomatology.

It has been interesting to note the progress in the development of the symptomatology of these two hepatic lesions during the last few

*Read in the Section on Obstetrics and Gynecology of the American Medical Association, at the Sixty-Second Annual Session, held at Los Angeles, June, 1911.

years; and while heretofore we have been in almost profound ignorance of any true symptoms leading up to their correct diagnosis, we seem now to be in the possession of some constant symptoms in the gastric lesions that occur concomitantly with these hepatic changes. And we are becoming familiar with the term "flatulent gall stone dyspepsia" initiated by the surgeons. While jaundice, the one-time pathognomonic symptom, is now relegated to a less important place in the list of constant diagnostic symptoms, its absence not affecting greatly the correct diagnosis, its presence is an additional factor indicating the presence of a toxic agent, or that there is or has been some hindrance to the normal flow of bile, possibly both. Pruritus usually succeeds the manifestation of jaundice, pain is often a misleading symptom, while enlargement of liver and tenderness on pressure are by no means constant symptoms.

Kehr, after operating on 1,668 patients with gall stones, writes that only in exceptional cases is it possible to state positively the presence of gall stones; that he uses the history of the case rather than the actual findings at the moment, and that when these formations are found at time of operation for something else, it is always possible to follow the history back to sufficient symptomatology for purposes of diagnosis. I believe that it is to this going back over the history of these patients by our surgeons that we owe the most of the constant features of these lesions, but they not only recognized them in patients already brought to the operating table because of other lesions; they also applied this knowledge with gratifying results in the diagnosis of these hitherto baffling diseases.

Sherren reports indigestion as a constant symptom for five years or longer in twenty-six out of forty operated on for gall stones; Rolleston gives indigestion as a result of gall stones; Lichty asserts that 75 per cent of all gall bladder cases may be associated with a disturbance of gastric secretions, and that of this 75 per cent two-thirds have hyperchlorhydria. * * *

Frequency in Women.

The one fact of primary importance in this study is the fact that gall stone disease occurs in women three times to its occurrence once in man. Other facts relevant to this are that 90 per cent of the women who have gall stones have borne children, and that 90 per cent of the women who have gall stones and have borne children identify the beginning of these symptoms of cholelithiasis with some particular pregnancy (Mayo). * * *

Granted that the child-bearing period is the time in which the initial lesions (the etiologic factors) are posited, wherein lies the causative factor, and what is the connecting link between that factor

and pregnancy? Are the changes in normal or physiologic pregnancy sufficient at any time to cause these hepatic lesions?

During the early part of pregnancy there is the factor of disordered nutrition pending final adjustment and adaption to the new requirements; this is the order in normal pregnancy, and so long as this process of adaptation does not bring about pathologic conditions it remains physiologic, and in due time the new order of living is established, and the old way is adjusted to and lost in the new. During this process of adaptation there is greater functioning to be established in all the organs; through the liver more of the products of metabolism, both anabolic and catabolic, are passing. And it is quite possible that this organ does not all at once meet these new and greater demands, and that many opportunities are offered the increased bacterial procession through the liver to stop in quarters wherein are attractions for them and thus become causative factors in the production of cholecystitis or cholelithiasis.

Goldsborough and Ainley by their demonstrations with phenolsulphonephthalein on renal activity have proved that metabolism in pregnancy and the puerperinum show great alterations normally, and that there is a decided difference in metabolism in the non-pregnant and the pregnant condition of the same individual. One particular statement made by them was of great interest in this particular study; namely, in the last month of pregnancy the power to eliminate falls far below that of the non-pregnant individual; while they demonstrate conclusively that throughout the entire period of gestation the normal obstetric patient eliminates more slowly than the normal non-pregnant individual.

From this I would conclude that throughout the entire period of gestation there are changes in metabolism sufficient to furnish etiology for these diseases of the biliary tracts; and that aside from the question of adjustment that must inevitably take place in the early months of pregnancy, the question of elimination during the later months in particular must be considered. In this are involved the changes going on in connection with the growth of the fetus, the placenta with its unique cycle of growth and senility while still within the body of its host, and possibly the internal secretions from the ovaries.

One and all of these, although eventually they become components in the great physiologic life-cycle, yet, pending their final adjustment, may become or furnish sufficient cause for disease. * * *

Pressure.

At all times during the last months of pregnancy a predisposing cause is always present in the form of pressure either directly or indirectly exerted on the liver by the gravid uterus. If, in accordance

with the findings of Charcot and Gombault, Naunyn and Sherrington, referred to by Windsor, the bile remains sterile only so long as it flows unhindered through its ducts, and after ligature of the common duct the bile speedily becomes infected, then normal pregnancy at all times furnishes a mechanical factor in pressure that is, in itself, sufficient cause for inflammation of the gall bladder as well as for the production of gall stones. And the same factors that in the one case may furnish a cause for the primary occurrence of cholecystitis or cholelithiasis during a pregnancy, may in another instance arouse and throw into activity one or both. It may be a cholelithiasis that has lain dormant a variable length of time until a primary or recurring pregnancy has produced the factors necessary for its arousal.

The Psychic Factor.

I am of the opinion that the psychic feature of pregnancy has a great deal to do, both directly and indirectly, with the etiology of these hepatic lesions. In pregnancy the feeling of dread is ever present, and is far-reaching in its influence on the circulation, the respiration, the renal activity, the nervous system *per se*, the nutrition, and no doubt the internal gland-secretion. During the last few years I have proved by the study of 300 cases of child-bearing women that without exception they felt a dread almost beyond words to express; that there is always a fear of death present—a going down into its shadows—every time this function of perpetuation of the race is gone through with. And, however much we as physicians and surgeons may minimize the suffering and the danger, each one of us knows that this view of the patient is true, and however calm and self-reliant the patient may be, apparently, there is always underlying her apparent tranquility this great fear that overshadows all else. This psychic feature is ever present, through pregnancy, parturition, and the puerperium—and it often manifests itself by means of the increased activity or derangement of the functions of the body. * * *

In addition to the indirect effect of emotion during pregnancy, in the production of these hepatic lesions, might be mentioned the direct etiologic factor that it furnishes by its action in depressing the resistance of the patient throughout her entire economy; the liver, no doubt, being primarily affected.

Pathologic Pregnancy.

The liver has assumed so important a position in the consideration of pregnancy that we are becoming accustomed to think of hepatic lesions as belonging to that condition, as evidenced by our chairman's use of the term "liver diseases of pregnancy" in a paper of recent date. If the liver fails in its office as a toxin filter of the pathologic bacteria

referable to mother, fetus, or placenta, these may furnish the infection necessary for the production of cholecystitis or cholelithiasis as a primary lesion, or for its exacerbation if it is present in a latent condition. There is no well-recognized line of demarcation between normal and pathologic pregnancy; anything that may cause hepatic lesions in the one may also cause them in the other; consequently, pressure from tumors, ascites, and other pathologic conditions, as well as pressure from the gravid uterus in normal pregnancy, may act to cause stagnation of bile with its sequelae of infectious agents and their resultant lesions in the biliary tracts.

Heart Correlation.

Sometimes cardio-vascular symptoms are manifested simultaneously with the gall stone attack in pregnancy. This condition is always alarming, and not so very many years—or shall I say months—ago, it was looked on as non-compensating heart disease, and by its presence furnished cause or excuse for the interruption of pregnancy, with the possible loss of both mother and child.

Symptoms in Pregnancy.

If cholelithiasis comes on during pregnancy, nausea and digestive disturbances may continue throughout the entire term; jaundice may occur or it may be entirely absent; jaundice at about the sixth month is not unusual, or it may appear as late as the ninth month and continue through parturition and the puerperium.

Pruritus is often a prominent symptom and a difficult one to relieve. Miscarriages are of frequent occurrence, and the prematurely born child may show signs of jaundice. Pain is often a misleading symptom.

Rolleston reports a case of a woman who had never had jaundice at any other time, in whom jaundice appeared in four successive pregnancies at about the sixth month; this was accompanied by great itching. In this patient nausea continued throughout all four pregnancies. The first three infants died of jaundice.

Nason reports a mother who after two normal pregnancies had a miscarriage; then followed a pregnancy with jaundice coming on in the latter part and extending through labor and the puerperium, with the loss of a jaundiced child; this was repeated in a fourth and fifth pregnancy; in the sixth and seventh pregnancies the mother was jaundiced about one month before delivery, but in each case the child was healthy. The eighth, ninth and tenth pregnancies were normal. Nason concludes from this case that there is a definite relationship between the jaundice in mother and the jaundice and ill health of the child, and that the condition was an infective one, the child being infected *in utero*.

Treatment.

Opinions would no doubt differ as to the treatment of cholecystitis and cholelithiasis during pregnancy; all would doubtless agree that, when this lesion is known to exist, if there are no well-developed manifestations or exacerbations by which the activity of this lesion may be interpreted, as exerting a deleterious effect on pregnancy, the course to pursue would be to let well enough alone. And by medical means the milder symptoms may be met and the patient guided to a safe termination of the period of gestation.

But if there should be recurrence of severe pain referable to these hepatic lesions, or symptoms of gall stones producing obstruction, or correlation of cardio-vascular symptoms, no time should be lost in resorting to surgical measures.

Ochsner says that gall stones and severe infections of the biliary tract have come to be looked on as purely surgical conditions. Would this statement hold good should these occur primarily, or show exacerbations during pregnancy? * * *

Conclusions.

From a study of this subject in general and from the special study of the cases submitted, the following conclusions may be drawn:

There is a close relation existing between cholecystitis and cholelithiasis and pregnancy.

Physiologic pregnancy furnishes sufficient predisposing cause for the production of these hepatic lesions in its disordered metabolism pending adjustment, changes in elimination of waste products, changes in the rate of elimination, mechanical pressure and in its psychic features.

Pathologic pregnancy, in addition to these factors, furnishes the pathogenic agent direct.

So-called physiologic jaundice in the new-born is an expression of the effort on the part of the liver to adjust itself to its new requirement, and should always be looked on as a serious condition; and when jaundice occurs in the new-born child, following jaundice in the mother, it is reasonable to conclude that this toxic condition was transmitted from the mother to the child *in utero*.

In all probability, much of the "dyspepsia of pregnancy" is from unrecognized hepatic lesions, and preferably those under discussion; at any rate, gastric disturbances in pregnancy, whether designated "morning sickness," "water-brash," "sour stomach," "nausea," or however they may be termed, should always be looked into further than the digestive tract itself and should not be regarded simply as concomitant features of a physiologic pregnancy.

ECLAMPSIA IN THE NEW-BORN.

Effa V. Davis, Chicago (Journal A. M. A., June 1), calls attention to the danger of the transmission to the new-born infant of the toxemia of the eclamptic mother. The child may be still-born or asphyxiated, or may die in a few hours of convulsions. A certain number, however, of greater resistance, survive, but these seldom fail to show some results of the mother's disorder. If they survive by the care of the obstetrician they often go to swell the number of weaklings that call for the care of the pediatrician. They, she believes, will account for a large number of the cases of icterus neonatorum and high temperatures not due to digestive tract trouble, etc. A certain proportion of them may be relieved and their lives saved by careful attention to the elimination of the toxin through the bowel and the kidneys. She believes that it is a mistake to put the child immediately to the mother's breast, and advises in preference the employment of a healthy wet-nurse. She has some faith in small divided doses of calomel and bicarbonate of soda, with an initial dose of castor oil and plenty of sterile water to flush the bowels. Weakened solutions of fennel or chamomile with a little sugar for a few days, are also favored, and if the temperature rises, two or three drops of spirits of niter for one or two doses to establish the urinary excretions. Over-dosing should be avoided, especially of calomel, as bowel hemorrhages are not uncommon. Warm baths and keeping the body warm are of the utmost importance. She is of the opinion that the milk of the toxic mother contains toxic ingredients and is the cause of infantile indigestion and its results. She divides the mothers of this type of infant into two classes: First and worst, are those with poor physique, and a bad family history, such as would be called "poor risks" by life insurance companies. The second class are those who primarily have good physiques and a good family history, but have disordered their elimination by luxurious living, idleness, etc. Both of these classes may prove more liable to have toxemias that may endanger their offspring than is the woman who has a damaged kidney from other causes and who is liable to abort early and be free from eclampsia. Twelve cases are reported illustrating her views.

TITLE PAGE.

The index to Volume XVIII will be found in this issue.

In arranging material for the printer last month, this was forgotten.

Those who intend binding the Journal, can utilize the page by extracting from this number and binding with the June number.

IOWA MEDICAL JOURNAL

A Monthly Journal

Devoted to the Interests of the Iowa Profession

E. E. DORR, M. D. Editor and Proprietor.

Subscription $2.00 per year, in advance.

"For Sale" and "Want" Ads, $2.00 each insertion. Write for Physician's Cards, $5.00 per year. Advertising Rates.

We request short papers and reports of cases from Iowa Doctors. All papers should be typewritten. Reprints furnished at cost and should be ordered when paper is sent us, as it saves expense.

We want papers from county societies.

OUR PLATFORM.

The Improvement of the Health of Iowa People.
The Improvement in Hygienic Conditions in all Iowa Cities.
The Improvement of the Profession, Individually and Collectively, in the Art and Science of Medicine.
The Improvement in Legislation so as to require High Attainments of every Practician, regardless of his School or Pathy.
The Improvement in Organization, making every legally Registered Physician of Good Standing in his Community a Member of his County and State Society.

Vol. XIX **Des Moines, July 15, 1912** **No. 1**

District and County Medical Societies.

This issue contains a number of papers read at the Des Moines District Medical Society, held in Ottumwa, June 20.

We are very glad to receive the papers from local or district societies, for we believe that much of the best thought of our medical men is offered at the home or adjacent medical meeting.

The papers read at the state meeting are published during the year in the state journal, and occupy so much of its space that the essayists from the smaller societies have little chance for recognition.

The up-to-date discussions of medical advancement are frequently found in the county society and they are entitled to recognition without delay.

This Journal is always willing to receive and use them at its earliest opportunity.

Cherokee Hospital.

A visit to this institution is better than a post-graduate course in an eastern city, for the reason that your personal interest in its success adds to the scientific interest, that is unfolded on every hand.

The superintendent, Dr. M. N. Voldeng, and his assistants offer every opportunity to the visitor to see and study with them the many interesting cases (900).

They have nothing to conceal, and no patient is withheld from observation, unless the illness is such that the visit is a disturbance.

There is not a padded cell nor a straight jacket in the institution.

There are no violent wards and no restraint of patients.

Two years ago, the Psycopathic Hospital was built and a complete hydrotherapy department installed.

The so-called, violent or noisy patient, is given a continuous bath and the results are simply remarkable. Within five minutes after the patient is in the bath, he begins to snore like a child and relaxes, perhaps for the first time in weeks or months. From the bath he is taken to a quiet room where he continues his sleep until fully rested.

Diet, fresh air and exercise do the rest.

Since the introduction of this treatment into this hospital, the cures in the institution amount to almost 30 per cent.

When the institution was being equipped, the superintendent asked for hair mattresses for every bed. It was a staggering request but was finally granted.

Not a patient in the hospital but has as good or better bed than he had at home.

Many improvements for the patients are being planned by the superintendent.

A golf course has been laid out, and is now being constructed on the 120 acre lawn of the institution, and those who can, will be encouraged to use it. The large dining-room will be converted into a gymnasium and library for the patients for winter use, and many other helpful forms of amusement are in the mind of the superintendent.

The profession of Iowa owe it to themselves and their patients to visit the insane hospitals of the state, and learn from personal observation, the humane interest that is being shown in our unfortunates.

Vacation.

Speaking for the practitioner, a vacation is the absenting himself from his arduous duties for a variable length of time.

Few physicians take the orthodox vacation, rest and a change of scenery, but hike off to some clinical center and continue to drill along the same lines, only the responsibility for the cases that he sees, are the other fellow's.

The question arises as to whether this sort of a vacation is really the best for him and his patients, or whether the dropping of professional work and the assuming of some independent and distinct line of doing nothing, might be better.

For the summer vacation, it seems to us, that the physician should seek some secluded spot where the telegraph and telephone are unknown, and for a fortnight devote himself to the wilds of nature.

His winter vacation might well be spent in a medical center in postgraduate work and in such pastimes as a large city affords.

But a vacation he needs, and should have. He is entitled to a few weeks of the year when he is not at the beck and call of the sick.

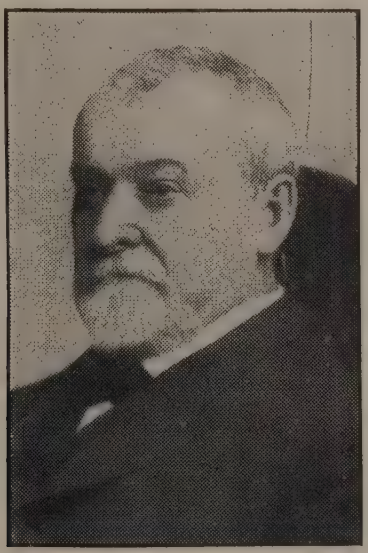
Dr. Geo. P. Hanawalt—In Memorium.

The death of Dr. Hanawalt on June 20, 1912, marks a history point in the profession of Polk County and the State of Iowa.

Dr. Hanawalt was born in Chillicothe, Ohio, and received his education at the Georgetown University, and immediately following joined the medical corps of the army and was stationed at Washington, D. C.

After four years of service, he came west and located in Des Moines, in 1868, becoming the surgeon of the Rock Island and its branches, at this point. He afterward was appointed surgeon for a number of railroads at this place, and was surgeon for the Des Moines Street Railway Company.

His army experience was such as to place him at once in the fore-



ground of scientific men in the state, and his general activity and success was unusual. He was one of the charter members of the Polk County Medical Society, and an early president of the Iowa State Medical Society.

He was a man of sterling and sympathetic qualities and held the esteem of his patients as few doctors do. His acts of kindness to the poor of his acquaintance were untold.

He married the daughter of the Honorable James Jordan, an early settler and pioneer law-maker of Iowa and for forty years resided at Twelfth and Walnut, and only moved from this place to his new home less than a year ago.

Perhaps no man in Des Moines had more personal friends than he, and his death is mourned by the whole community.

SOCIETY REPORTS.

CHICKASAW

County Medical Society held its Mid-Summer meeting in Nashua, June 6.

The feature of the meeting was a noon-day banquet with decorations of skulls and cross-bones, and flowers. It is needless to say that the occasion was an enjoyable one.

MILLS

County Medical Society held its June meeting at Silver City on the 13th.

Dr. Dunn of Omaha, read the leading paper entitled "Nephritis." Drs. McCue, Hubert and Moon had charge of the arrangements.

CLINTON

County Medical Society met as usual at the Kehoe Grill Room, June 13, with a Dutch treat lunch.

The paper of the evening, which was fully discussed, was by Dr. Grace Schermerhorn on the subject "Infections following Child-birth."

PAGE

County Medical Society held its regular quarterly meeting in Shenandoah, June 21.

Dr. Powers of Clarinda gave a report of the State Medical meeting and Dr. Robb read a paper on "The Doctors' Trust."

Resolutions were adopted urging the support of the Owens Bill,—to establish a medical bureau of health. A large number of doctors from out of town were present. The next meeting will be held in Coin, in September.

LEE

County Medical Society met in Keokuk, June 14. The wives and members enjoyed an auto ride over the city and out to the big dam, and then a banquet.

The program as given, was carried out:

"Operative Procedures in Advanced Malignancy," C. E. Ruth, Des Moines, Iowa.

"The Need of More Exact Diagnosis in Diseases of the Right Lower Quadrant," C. A. Boice, Washington, Iowa.

"Pain in Gastric Ulcer," J. R. Walker, Fort Madison, Iowa.

"Indications for Tonsillectomy," R. M. Lapsley, Keokuk, Iowa.

"Tonsilectomy Versus Tonsillotomy," R. S. Reimers, Fort Madison, Iowa.

"The Prevention of Typhoid Fever by Vaccination," O. T. Clark, Keokuk, Iowa.

"Double Uterus; Pregnancy; Specimens," F. B. Dorsey, Keokuk, Iowa.

The paper by Dr. Clark appears in this issue of the Journal.

IOWA AND ILLINOIS

Medical Society met in Davenport, July 11, with the following program:

Invocation, Rev. H. W. Reed, Rock Island.

A Resume of One Hundred Cases of Obstetrics, James N. Downs, Annawan.

Observations on results of Gall Bladder Surgery, J. W. Seids, Moline.

Cancer of the Uterus and a Rational Method of Treatment, J. F. Percy, Galesburg.

The Medical Organization of the Modern Hospital, W. L. Graham, Des Moines.

The Equipment of Hospitals for Scientific and Efficient Work, D. S. Fairchild, Clinton.

Drs. Percy, Bierring, Hertzler, Fay, Pond, Allen and Braunlich have been especially requested to discuss Numbers 5 and 6.

Suppurative Kidney, with Report of Cases, Oliver J. Fay, Des Moines.

The Diagnosis of Tumors of the Breast, A. H. Hertzler, Kansas City.

President's Address, H. M. Decker, Davenport.

MARION

County Medical Society met in Knoxville, June 19, for one of their usual big affairs. Doctors from all over the county were there, and in many instances were accompanied by their wives.

The usual noon banquet was given at the Commercial Hotel, with band music and speaking. The program was rendered at the court house in the afternoon. Those reading papers were as follows; "Prophylaxis in general," Dr. C. F. Aschenbrenner, Pella; "Typhoid Fever," Dr. J. M. Weiss, Knoxville; "Acne," Dr. E. C. McClure, Bussey; "Chronic Ulceration of the Lower Lip," Dr. C. W. Cornell, Knoxville.

GREENE

County Medical Society were entertained by the Jefferson physicians at dinner June 6, Dr. Chas. Enfield read a paper on "Pneumonia with Pleuritic Complications of an Aggravated Kind." Dr. R. Martin of Rippey, read a paper on "Early Diagnosis of Malignant Diseases." A large attendance was present. The next meeting will be at Jefferson, the first week in December.

DUBUQUE

County Medical Society held its annual meeting June 26, with 100 members present.

Dr. Pond discussed "What are we doing for Cancer?" Dr. C. P. Howard, Iowa City, gave "Some points in Etiology and Recognition of Aortic Insufficiency." Dr. A. C. Crofton of Chicago read a paper on "Certain Manifestations of Masked Gout, Their Diagnosis and Treatment."

Dr. W. L. Baker was elected President and Dr. W. J. Moes, Secretary.

DES MOINES VALLEY

Medical Society held its 41st Annual Meeting in Ottumwa, June 20, 1912.

The meeting of the society has become so noted that few in the district adjacent to Ottumwa miss the opportunity to be present.

A good program is always furnished. Sometimes it is better than usual but always worth hearing.

Most of the papers read will appear in the Iowa Medical Journal, this issue containing several.

Officers elected were Dr. J. W. Osborn, Des Moines, President; Dr. Fred Bowles, Ottumwa, Secretary.

The program of the meeting is given: "Prophylactic Typhoid Vaccine," was the subject of Dr. L. A. Rogers of Oskaloosa. Dr. Alfred Schalek of Omaha, Nebraska, told of the "Modern Progress in the Knowledge of a Terrible Disease," and C. E. Ruth of Des Moines, discoursed on "The Omentum in Abdominal Surgery." "How we may Lower Mortality from Cancer," was the subject of Dr. Wm. Jepson of Sioux City. Dr. E. T. Edgerly closed the afternoon program in a discussion of "Public Schools with Relation to Public Health."

BOOK REVIEWS.

MASSAGE AND THE SWEDISH MOVEMENTS.

Their application to various diseases of the body; lectures before the training school for nurses connected with the hospital of the University of Pennsylvania, German Hospital, Woman's Hospital, Philadelphia Lying-in Charity Hospital, the Philadelphia Polyclinic and College for Graduates in Medicine, and the Kensington Hospital for Women, of Philadelphia. By KURRE W. OSTROM, from the Royal University of Upsala, Sweden. Seventh Edition, with 115 illustrations. Price, $1.00. P. Blakiston's Son and Company, Philadelphia, publishers.

The man doing general practice will find in this little volume much to interest him.

The concise and practical suggestions, here given, should encourage him to a review of the book, that he may accomplish for his patient, that which he frequently refers to the physical manipulator or allows to drift into the hands of the osteopath.

THE CARE OF THE SKIN AND HAIR.

By WILLIAM ALLEN PUSEY, A. M., M. D., Professor of Dermatology in the University of Illinois, D. Appleton and Company, New York and London, publishers.

A practical and resourceful little book.

PRACTICAL MEDICINE SERIES.

Comprising ten volumes of the year's progress in medicine and surgery, by GUSTAVUS P. HEAD, M. D., professor of Laryngology and Rhinology, Chicago Post-graduate Medical School, and CHARLES L. MIX, A. M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume III, the Eye, Ear, Nose and Throat, edited by CASEY A. WOOD, C. M., M. D., D. C. L., ALBERT H. ANDREWS, M. D., GUSTAVUS P. HEAD, M. D.; the Year Book Publishers, Chicago.

This is a splendid deveolpment of the years review along these lines. The tendencies appears to be that of conservatism, more than in former years. Those interested will enjoy the volume.

TEXT-BOOK OF GYNECOLOGY.

By WILLIAM SISSON GARDNER, M. D., Professor of Gynecology, College of Physicians and Surgeons, Baltimore, Md.; with 138 illustrations; D. Appleton and Company, New York and London, publishers.

The etiology and symptomatology are plain and sufficiently elaborated for ordinary use. Treatment, local, especially is given in very satisfactory manner, while operative technique is not attempted.

The general practitioner will find much of interest in the way of review and late methods both of diagnosis and treatment.

LABORATORY METHODS.

With special reference to the needs of the general practitioner by B. G. R. WILLIAMS, M. D., member of the Illinois State Medical Society, American Medical Association, etc., assisted by E. G. C. WILLIAMS, M. D., formerly Pathologist of Northern Michigan Hospital for the Insane, Traverse City, Michigan, with an introduction by VICTOR C. VAUGHN, M. D., LL. D., Professor of Hygiene and Physiological Chemistry and Dean of the Department of Medicine and Surgery, University of Michigan, Ann Arbor, Michigan; illustrated with forty-three engravings; C. V. Mosby Company, St. Louis, publishers.

The general practitioner can no longer do his work satisfactorily without laboratory aid, and this book is a practical compilation of methods that can be worked out by the country practitioner as well as by the city man. It deserves the careful consideration of the general man as much as any book on Etiology.

INTERNATIONAL CLINICS.

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This volume is fully up to the standard previously set by the editor and will repay the reader for the time used in its reading. Scientific articles and subjects up-to-date are fully discussed.

MEDICAL NEWS NOTES.

Dr. Jennie Ghrist of Ames, visited in Virginia, in June.

Dr. Karterman of Ida Grove, visited in Minneapolis, in June.

Dr. W. A. Guild of Des Moines, has returned from an eastern trip.

Dr. W. W. Hunter of Monticello, spent a week in June, at Colfax.

Dr. H. T. Walker of Dubuque, is again engaged in active practice.

Dr. A. S. Gockley of Carroll, has been visiting relatives in the east.

Dr. and Mrs. Reppert of Burlington, have returned from a western trip.

Dr. C. W. Beaver of Anita, was nursing a sprained ankle during June.

Dr. R. D. Bernard of Clarion, attended clinics in Chicago, during June.

Dr. A. B. Corbit and son, of Wyoming, visited friends in Michigan, in June.

Dr. J. N. Porter of Prairie City, is spending the summer in South Dakota.

Dr. and Mrs. J. E. Garver of Sioux City, have returned from Los Angeles.

Dr. V. B. Knott of Sioux City, spent June on a fishing trip in Oregon.

Dr. L. E. Noble of Rhodes, has been taking post-graduate work in Chicago.

Dr. W. A. Rohlf of Waverly, is recovering from an operation for gall stones.

Dr. A. T. Miller of Lyons, is taking several months post-graduate work in Europe.

Dr. Freeman Hornibrook of Cherokee, has been visiting in California and Idaho.

Dr. P. B. Cleaves of Cherokee, attended clinics at Rochester, the latter part of June.

Dr. W. W. Hale of Des Moines, has returned from his ranch in Durham, Wyoming.

Dr. J. E. O'Keefe has returned to Waterloo after a pleasant vacation spent in the east.

Dr. W. T. Harris and family of Keosauqua, are visiting in Kentucky and Tennessee.

Dr. R. A. McGuire of Brighton, has recently taken a post-graduate course in Chicago.

Dr. Shriner of Minnesota, has accepted the position of assistant at the hospital of Mt. Pleasant.

Dr. D. Sicker and son, of Boone, have been visiting the doctor's boyhood home in New York.

Dr. F. J. McAllister of Hawarden, has recently taken a post-graduate course in Chicago.

Dr. Cady and son Donald, of Harris, spent the month of June visiting relatives in the state.

Dr. and Mrs. E. J. Wintenburg of Delhi, left early in June on a pleasure trip through the east.

Dr. E. J. Butterfield of Dallas Center, has recently taken a months post-graduate course in Chicago.

Dr. and Mrs. C. O. Baker of Fort Madison, have been visiting friends and relatives in Michigan.

Dr. H. D. Chamberlain of Nevada, recently returned from a visit with relatives and friends in Ohio.

Dr. F. J. Smith and family of Des Moines, are spending the summer at their cottage at the lakes.

Dr. C. A. Heise of Missouri Valley, is spending six weeks, visiting the hospitals in Rochester, Minnesota.

Dr. Walter L. Bierring of Des Moines, was very ill with pneumonia, in June, but is now convalescing.

Dr. E. E. Heaton of Centerville, is attending clinics in Vienna,

London and Berlin. Dr. C. H. Peppers of Omaha, will have charge of the doctor's practice during his absence.

Dr. J. C. Barringer of Oskaloosa, has been spending July in the Wisconsin woods, at Birch Island Lake.

Dr. and Mrs. D. W. Dickinson and son Sherman, of Des Moines, are spending the summer at Lake Okoboji.

Dr. and Mrs. E. J. Wintenberg of Manchester, have returned from the east and report a very enjoyable trip.

Dr. and Mrs. W. R. Whities and son of Iowa City, have gone to their summer home in Detroit, Minnesota.

The Jefferson County Hospital, which is to be paid for by a tax voted by the people, is very near completion.

Dr. and Mrs. H. R. Layton of Leon, have returned from their western trip, and report a delightful vacation.

Dr. Ben Hamilton, Jr., of Jefferson, has returned from Chicago, where he has been taking post-graduate work.

Dr. and Mrs. S. F. DeVore of Missouri Valley, are home from their western trip and report a very enjoyable time.

Dr. and Mrs. Granville Ryan of Des Moines, were in Minnesota for a couple of weeks in June, camping at Lake Charlotte.

Dr. C. M. Harrington and wife, of Knoxville, are enjoying a vacation camping in the Ozark mountains of southern Missouri.

Dr. and Mrs. W. F. Boiler of Iowa City, enjoyed a vacation on the Mississippi, going from Davenport to Minneapolis and back.

Dr. T. F. Desmond of Webster City, reports a sprained ankle the latter part of June. We hope that he is again able to be about.

Dr. J. W. Cunningham of Bristow, has been elected to the office of Supreme Medical Examiner of the Mystic Shriners of the World.

Dr. W. W. Stirlen, of Delta, has returned from Denver, Colorado, where he was taking some work in Dr. Boney's Tubercular Sanitorium.

Dr. H. H. Woodward of Adair, has undergone an operation at Rochester for cancer of the intestines. We hope for his complete recovery.

Dr. J. W. Heustis and family of Dubuque, have gone to Washington, D. C., where they will make their home for an indefinite period of time.

Miss Bertha G. Kinne of the Asbury Hospital, Minneapolis, has accepted the position of Superintendent of the new Washington County Hospital.

Dr. O. A. Pitcher of Mt. Pleasant, has been taking treatments at Battle Creek, Michigan. The doctor reports very little improvement in his health.

Drs. Charles Bartruff, Percy Glew and Guy Clift of the Drake Medical School have been selected as Police Surgeons in Des Moines, to assist Dr. Saylor.

Dr. Esther Ryerson of Colfax, is enjoying a trip through the west, visiting Yellowstone Park, Seattle and points along the coast, returning home through Canada.

Dr. D. N. Pattison of Oelwein, was in Washington, D. C., in June, attending a reunion of his class of the Annapolis Naval Academy. He reports a very fine time.

Dr. B. G. Dyer of Ames, is taking post-graduate work in New York. Upon his return, he expects to abandon general practice and specialize on eye, ear, nose and throat work.

Dr. Carl Von Noorden of Vienna, has accepted the invitation of the New York Post-graduate Medical School for a series of lectures on problems of Metabolism for October, 1912.

Drs. M. Bannister of Ottumwa and M. L. Voldeng of Cherokee, have returned from the east, where they were investigating the most modern methods of treating the tuberculous insane.

Dr. J. L. Peppers of Goldfield, has been in the east where he visited his brother and attended the Baltimore convention as a delegate. Mrs. Peppers and the children are spending the month in Alva, Arizona.

At the eighty-first annual commencement of Wesleyan University at Middletown, Connecticut, held June 19, the degree of Doctor of Laws was conferred upon Dr. Amos J. Givens, proprietor of Givens Sanitarium for nervous diseases at Stamford, Connecticut.

The Fifteenth International Congress on Hygiene and Demography, unless the signs fail, will be very largely attended by the physicians of Iowa. Already quite a number have taken membership in the congress and expect to attend. Any person sending $5.00 to the Secretary-General, Dr. John S. Fulton, Senate Annex, Washington, D. C., will become a member of the congress and will receive the proceedings, and, if present, will be entitled to sit in all the sessions. Many mayors have appointed delegates to the congress, so that cities and towns may take advantage of the exceptional opportunities presented by this congress for a more scientific knowledge of sanitation and hygiene. As soon as complete information has been received concerning hotels and railroad rates, etc., same will be announced by the Iowa Commission.

CHANGE OF LOCATION.

Dr. W. E. Cody of Sioux City, is to become resident physician of the University hospital at Iowa City.

Dr. E. A. Sommers of Hopeville, has located in Conway.

Dr. H. A. Habenicht, formerly of Allerton but recently of Des Moines, has located in Montrose, Colorado.

Dr. A. L. Haynes of Toledo, has removed to Grand Valley, South Dakota.

Dr. Jos. C. Edgar of Holstein, has removed to Pomona, California.

Dr. J. B. Sherbon, recently of Berlin, has located at Hartley.

Dr. R. E. Brisbine of Atalissa, is now located at Iowa City.

Dr. C. E. Stewart of Paulinna, has sold his practice at that place to Dr. E. E. Holland of Richmond, Indiana.

Dr. A. M. Laugel of Breda, has sold his practice to Dr. E. W. Burkhart of Ulmer, Iowa. Dr. Laugel will move to Montana.

Dr. Margaret Armstrong of Marysville, Missouri, has become associated with Dr. Lenna Means, Des Moines.

Dr. Frank G. Rhodes of Peoria, Illinois, has located in Eldon, Iowa.

Dr. J. T. McConnaughy of Wayland, has located in Washington.

Dr. Robert Wright has located in Wright, Iowa.

Dr. E. Grant Myrick has sold his practice in Fairfield to Dr. C. B. Bateman.

Dr. D. E. Tiffany of Cedar Rapids, has removed to Marion.

Dr. A. D. Miller of Hampton, has located in Humboldt.

BIRTHS.

Dr. and Mrs. A. J. Droz of Keota, are the happy parents of a baby girl born June 6.

Dr. and Mrs. E. H. Crane are happy over the arrival of a daughter, June 2.

Dr. and Mrs. G. H. Mammen of Le Mars, are the parents of a little daughter, born June 20.

Dr. and Mrs. W. R. McCray of Charles City are the very proud parents of a young son, born June 16.

WEDDINGS.

Dr. T. C. Knox of Marcus, and Miss Madge Elisworth of Marshalltown, were married June 27, at St. Pauls Church, Marshalltown.

Dr. C. O. Yenerich of Rockford, and Eleanor Helen Flaherty of Dayton, were married June 11, at the home of the bride. Dr. and Mrs. Yenerich will be at home to their friends in Rockford.

DEATHS.

Dr. F. E. Cook died at his home in Oxford Junction, Friday evening, June 7.

Dr. W. F. Mueller of Denison, died at his home, in June.

Dr. J. H. Hutchins of Hampton, died of paralysis, June 23.

Dr. J. M. Evans died of paralysis at his home in Salem, June 6.

Dr. and Mrs. J. M. Fulton lost a baby boy, June 20.

Dr. L. S. Groves of Creston, died at his home, May 4. He was 78 years old and had practiced medicine until a few months ago.

Dr. J. E. Bready died at his home in Dubuque, in June.

Mrs. Hattie Mantle, wife of Dr. W. B. Mantle of Albion, died June 11, from ptomaine poisoning caused by eating canned salmon.

AUTO NOTES.

Dr. C. E. Ctler of Magnolia, was painfully, though not seriously, injured in June when his car turned turtle in going down a steep hillside.

Dr. and Mrs. Elmer Bare of Indianola, are spending six weeks on their ranch in Florida. They made the trip in their automobile.

Dr. and Mrs. C. W. Brown of Clinton, are making an extended automobile trip through Canada.

Dr. C. A. Waterbury of Waterloo, sprained his wrist badly while cranking his machine.

Dr. A. R. Young of Northwood, has a new Mitchell touring car.

Dr. J. H. Sams of Clarion, is the owner of a new Marion automobile.

Dr. and Mrs. M. L. Hooper of Indianola, have a new Marion "45."

Dr. H. M. Austin and family of South English, spent a part of June touring Iowa in their machine.

Dr. Leslie L. Smead of Newton, has recently purchased a new Velie roadster.

Dr. and Mrs. C. W. Ellyson of Alta, recently traveled to Minneapolis and back in their machine.

Dr. H. B. Wilkinson of Perry, spent a couple of weeks in June traveling over Iowa in his Mitchell car.

Dr. T. W. Mulhern of Harlan, is the recent owner of a Brush machine.

Dr. James Maynard of Adair, has purchased a 1912 Hupmobile.

Dr. W. E. Long of Mason City, has a new Reo.

Dr. J. F. Studebaker of Lake City, is in New York taking a postgraduate course. He is making the trip in his machine.